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Impact of the Computer on Job Analysis in the United States Air Force

By

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Lackland Air Force Base, Texas

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**IMPACT OF THE COMPUTER ON JOB ANALYSIS
IN THE UNITED STATES AIR FORCE**

By

**Joseph E. Marsh
Raymond E. Cristal**

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FOREWORD

The computer printouts given in the tables were derived from a survey of veterinary career ladders conducted during December 1965 and January 1966 by HRB-Singer, Inc., State College, Pennsylvania, under contract No. AF 41(609)-2379. Computer programs for analyzing the job inventory data were prepared by Computer Sciences Corporation, Houston, Texas, under contract No. AF 41(609)-1982 and contract No. AF 41(609)-2387.

The research reported was carried out under Project 7734, Development of Methods for Describing, Evaluating, and Structuring Air Force Occupations; Task 773401, Development of Methods for Collecting, Analyzing, and Reporting Information Describing Air Force Specialties.

This report has been reviewed and is approved.

James H. Ritter, Colonel USAF
Commander

ABSTRACT

In keeping with present trends toward the automation of personnel information, the Air Force method of job analysis provides for the exploitation of advances in electronic computer technology. Computer capability is applied not only in the analysis of job inventory data but also in the construction, administration, and publication phases of the procedure. During inventory construction the computer is used to prepare alphabetic lists of tentative task statements according to pertinent key words. This grouping by topic facilitates the detection of redundancy and insures the elimination of duplicate statements. In the administration phase, the computer selects the required sample of job incumbents from current personnel rosters maintained on magnetic tape. In addition, the computer prints names and addresses on appropriate labels to attach to inventories for mailing. It is in the area of occupational data analysis, however, that the computer makes its most impressive impact. By application of a complex program consisting of over 50,000 instructions, those incumbents in a survey sample who perform essentially the same job are grouped together, and a job description composed of duties and tasks is published for each such job type identified. The computer also lists information available for each case and reports means, standard deviations, and distributions of values for specified variables. Composite job descriptions may also be obtained for any group defined in terms of job-related variables such as grade, specialty, years of experience, or specialized training. Other programs compute and generate tables showing group similarities and group differences, thus providing a condensed picture of interrelationships or revealing dissimilarities among job types or other groups. And finally, a program selects and arranges the job descriptions, tabular outputs, and explanatory text materials in any desired order and publishes the complete job analysis survey report.

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IMPACT OF THE COMPUTER ON JOB ANALYSIS IN THE UNITED STATES AIR FORCE

I. INTRODUCTION

The phenomenal computer capability of compressing months of calculation by conventional methods into a matter of hours has led to widespread applications in business and industry and in agencies of the United States government. The computer today plays a major role in the solution of problems of astronomy, space flight, airplane and missile design, nuclear physics, weather forecasting, trend analysis, and information storage and retrieval. The use of the computer in the operations of the Internal Revenue Service, in public utilities, and in banks has made commonplace the injunction, "Do not fold, spindle, or mutilate." It is inevitable perhaps that the computer should become involved with personnel management. In step with advances in the processing of personnel data, the Air Force has evolved a job analysis methodology which is compatible with specifically designed computer programs.

II. THE AIR FORCE METHOD OF JOB ANALYSIS

As described in detail in several reports by Morsh and others,¹ the job inventory is the foundation of the Air Force method of job analysis. The inventory, designed to cover all levels of a particular career or promotion ladder, is constructed from published source materials according to a standardized format. An inventory usually consists of from 200 to 400 task statements, grouped under major functional categories which are called duties. After technical review and revision the inventory is administered by mail to samples of approximately 500 to 2,000 job incumbents. The participants supply identification and background information and indicate performance or non-performance of tasks. They then record the relative time spent on each task and rate the tasks on factors such as difficulty, frequency of performance, criticality, or training emphasis required. Incumbents' responses constitute the raw data for the computer analyses.

III. SELECTION OF REPRESENTATIVE SAMPLES

The computer facilitates the selection of current and representative samples for inventory administration. Up-to-date files of all personnel in the Air Force are maintained on magnetic tape for maximum accessibility. A computer program enables a user to request any desired roster from this tape. In addition, the computer prints the name and mailing address on appropriate labels. Thus, the required sample may be selected and inventories addressed and mailed to incumbents with a minimum of clerical assistance.

IV. GROUP JOB DESCRIPTIONS

It is in the analysis of occupational data, however, that the electronic computer makes its most impressive impact. Complex programs have been written for treating masses of job

¹ All of the sources included in the list of references serve to provide a general background of job analysis concepts and techniques.

data which until recently would have been impossible to handle. The outputs of these programs have significant implications for occupational research and for personnel management.

The computer will generate composite job descriptions, made up of tasks performed, for any group of individuals where the cases can be defined in terms of background variables. For example, a job description can be computed for incumbents who have taken a special course, or for individuals who have been on the job for less than six months, or for men in the surveyed specialty who are assigned to a particular squadron. Indeed, job descriptions can be generated in terms of values or ranges of values on as many as nine variables. Thus, it is perfectly feasible to obtain a description for a group of weather officers, say, who are all majors with regular commissions, who hold a Bachelor's degree in engineering and have completed a course in high altitude forecasting, have a minimum of 24 months' experience as meteorologists, are assigned to an overseas command, are less than 35 years of age, and are married or divorced.

Tables 1 through 10 in the appendix are replications of computer printouts of various facets of job analysis procedures. Table 1 presents the first page of a standard consolidated group job description which may run to five or six pages. This particular description was compiled for Air Force Veterinary Specialists working at the journeyman level. The percentage of work time fully accounted for is computed for both duties and tasks. The percentage shows the extent to which the composite job description covers the work of the average member of the group. Values in the first numeric column indicate the percentage of members performing each task. Column 2 shows the average percentage of work time spent by members of this journeyman group who perform each task. Column 3 indicates the average percentage of work time spent on each task distributed across the group. This third column is the group job description since it accounts for the work time of all members. Tasks in the job description are arranged in descending order of magnitude of values in this column. Column 4 presents the cumulative sums of the values in Column 3, that is, the average percentage of work time accounted for by tasks up to and including any task listed in the job description.

As seen in Table 2, similar job descriptions are also published where duty categories are used instead of tasks.

V. JOB TYPE DESCRIPTIONS

The computer program having the greatest potentiality for manpower organization and personnel management is that which identifies and describes the job types existing in an occupational survey sample (Morsh, April 1965). This highly complex program first computes the similarity between every pair of jobs in the sample. Since the complete square matrix is generated, the initial step for a 2,000-case sample involves computation of some 4,000,000 overlap values. Then, by means of an automated job clustering program consisting of over 50,000 programmed instructions, incumbents performing essentially the same jobs are identified and grouped together. Task and duty job descriptions are published for each job type differentiated.

Table 3 presents the first page of the job description by tasks computed for the Food and Sanitation Inspector job type identified in the veterinary career ladder. The same job type description based on duties is shown in Table 4. Job type descriptions appear in the same format as other group descriptions previously described.

VI. DESCRIPTION OF JOB TYPE MEMBERS

Another program is used to describe the individual members of each job type in terms of the history and background information collected during the survey. The computer tabulates

all the data available for each member of the group under appropriate headings. For example, the tabulation might include such information as grade, specialty, education, command, special courses attended, and months of experience in the career field reported by members of the particular job type. Table 5 presents the background information data of Food and Sanitation Inspectors who compose one of the significant job types identified in the survey of the veterinary career ladder. These history and background summary reports are extremely valuable. For instance, they serve to identify persons working above or below their skill level or to locate jobs which can be performed by inexperienced personnel.

VII. CONSOLIDATION OF GROUP INFORMATION BY TASK

Instead of reporting job data in terms of groups of individuals surveyed, a program has been developed which analyzes the data according to the tasks performed. Tasks are listed in inventory order showing the percentage of the members of a group who perform each task. The group may be the entire sample surveyed or any job type or other subgroup specified. The percentage of members performing each task for groups with differing amounts of active federal military service is shown in Table 6. Only the first 48 tasks of the 256 tasks in the inventory have been included. Similar tables list tasks in inventory order but show the average percentage of time spent on each task by group members. The average percentage of time spent on the first 48 tasks by the same experience groups appearing in Table 6 is presented in Table 7. In order to facilitate comparison, data pertaining to several groups are usually shown in the same table. For example, several job types, or skill level groups, or groups having various amounts of experience are shown together.

VIII. GROUP SIMILARITY ANALYSIS

For purposes of selection and training, it is often desirable to know in what respects the work performed by one group resembles the performance of another group. To meet this need, a program has been written which computes and reports a matrix of similarities among all groups identified in an analysis. This output provides a condensed picture of the interrelationships among job types and other groups. It is especially useful in detecting the need for new shreddouts or for combining existing shreddouts. Part of a group similarity summary table is presented in Table 8 which shows the overlap of veterinary career ladder groups in terms of the average percentage of time spent on each task by group members. The groups are identified in Table 11.

IX. JOB DIFFERENCE DESCRIPTIONS

Because it sometimes is as important to know why groups are different as to know why they are similar, a program has been designed to publish job difference descriptions. These descriptions reveal dissimilarities between job types or other groups identified. All tasks in the inventory are ordered according to the magnitude of the absolute differences between the two groups compared. Group differences are shown for percentage of the members performing each task and for the average percentage of time spent on each task. A page from such a job difference description is shown in Table 9.

X. STATISTICS ON BACKGROUND INFORMATION VARIABLES

Another program provides an analysis of background information collected as part of a survey. The output reports mean, standard deviation, and distribution of responses of any group for any variable specified. Information may be obtained, for example, on the extent to which certain tools are used and the types of equipment worked on, as well as the kinds of individuals who use the tools or work on the equipment. The investigator has complete flexibility in selecting variables and in prescribing intervals in the distributions.

XI. ANALYSIS OF TASK RATING FACTORS

In most occupational surveys conducted by the Air Force, besides data on task performance and non-performance and the relative time spent on tasks, information is obtained on such task ratings as difficulty, criticality, frequency, or required training emphasis. Several of these task rating factors may be included as subsamples in a single survey. A computer program automatically breaks out the cases responding to each factor, analyzes the data, and publishes the results. A printout derived from this program, for 10 groups and for the first 11 tasks in the inventory, is presented in Table 10. The groups are identified in Table 11 in the appendix.

XII. FINAL OCCUPATIONAL ANALYSIS SURVEY REPORT

Finally, a program is available which selects and arranges the job descriptions and tables produced by the programs previously mentioned in any desired order for publication. Verbal texts including tables of contents and descriptive or explanatory materials may be introduced as required. The computer is then used as the means for publication of 12 to 24 copies of the comprehensive job analysis survey report. This report may contain as many as 1,000 pages.

APPENDIX

Table 1. Group Job Description by Tasks - Veterinary Specialist DAFSC 90850

TASK JOB DESCRIPTION,CASES= 127,TASKS= 256,UTILES= 11,WORKS= 176	
DAFSC 90850 VETERINARY SPECIALIST	
TIME PERFECTLY DESCRIBED ON UTILES= 68.23, TASKS = 43.39	
CUMULATIVE SUM OF AVERAGE PERCENT TIME SPENT BY ALL MEMBERS.....	
AVERAGE PERCENT TIME SPENT BY ALL MEMBERS.....	
AVERAGE PERCENT TIME SPENT BY MEMBERS PERFORMING.....	
PERCENT OF MEMBERS PERFORMING.....	
DUTY/TASK TITLE.....	
E 21	INSPECT PERISHABLE FOODS FOR CONTRACT COMPLIANCE
E 6	COLLECT LABORATORY SAMPLES OF SUBSISTENCE ITEMS
E 14	COLLECT EGGS AND EGG PRODUCTS
E 24	INSPECT SANITARY CONDITIONS OF CONTAINERS AND VEHICLES
	USED FOR SHIPMENT
B 3	COMPILE STATISTICAL DATA FOR RECORDS AND REPORTS
E 22	INSPECT PREPACKAGED FROZEN FOODS
G 8	PERFORM CERAOLEPTIC EXAMINATIONS
E 13	INSPECT DAIRY PRODUCTS FOR QUALITY AND CONTRACT COMPLIANCE
E 31	PREPARE LABORATORY SAMPLES FOR SHIPMENT
E 18	INSPECT MISCELLANEOUS PRODUCTS SUCH AS FATS, OILS, MARGARINE, AND CEREAL
B 24	MAINTAIN FILES OF RECORDS, FORMS, CORRESPONDENCE, AND REPORTS
I 8	MAINTAIN ORDER AND CLEANLINESS OF BASE VETERINARY CLINIC
E 9	GRADE EGGS TO DETERMINE CONTRACT COMPLIANCE OF EGGS AND EGG PRODUCTS
B 28	PREPARE MAINTENANCE AND INSPECTION RECORDS AND REPORTS
F 5	CONDUCT SANITARY INSPECTIONS OF BASIC FACILITIES
G 3	INSPECT ARRANGEMENTS OF DUNNAGE AND FOOD ITEMS
E 33	REPORT RECOMMENDED REJECTIONS OF SUBSISTENCE ITEMS TO CONTRACTING OFFICER AND TO COMMISSARY OFFICER
E 29	MAINTAIN LIST OF FEDERAL AND MILITARY SPECIFICATIONS
G 5	INSPECT STOCK ROTATION CONTROL METHODS
G 2	INSPECT AND RECOMMEND PROPER HANDLING OF STRANGE ITEMS
B 27	PREPARE CORRESPONDENCE
E 19	INSPECT NONPERISHABLE SUBSISTENCE ITEMS FOR CONTRACT REQUIREMENTS
E 20	INSPECT PACKING METHODS AND PACKAGING
H 22	MAINTAIN HEALTH AND TREATMENT RECORDS OF ANIMALS
B 23	MAINTAIN FILES OF LABORATORY RECORDS AND REPORTS
G 4	INSPECT MAINTENANCE OF TEMPERATURE AND HUMIDITY LEVELS IN STORAGE AREAS
G 6	INSPECT STORAGE AREAS FOR INSECT AND RODENT CONTROL
I 1	AID VETERINARY OFFICER IN ZOONOTIC DISEASE CONTROL PROGRAM
G 9	RECOMMEND IMMEDIATE USE OR OTHER DISPOSITION OF DETERIORATED ITEMS
H 19	EXAMINE FECAL SPECIMENS
E 11	GRADE PERISHABLE FOODS FOR CONTRACT COMPLIANCE
H 28	POST DATA IN ANIMAL RECORDS
H 9	ASSIST IN PHYSICAL EXAMINATION OF ANIMALS

Table 2. Group Job Description by Duties—Veterinary Specialist DAFSC 90850

DUTY JCB DESCRIPTION•CASES= 327, TASKS= 256, DUTIES= 11, MTRS= 176		DAFSC 90850 VETERINARY SPECIALIST		TIME PERFECTLY DESCRIBED ON DUTIES= 68.28, TASKS= 43.39	
		CUMULATIVE SUM OF AVERAGE PERCENT TIME SPENT BY ALL MEMBERS.....			
		AVERAGE PERCENT TIME SPENT BY ALL MEMBERS.....			
		AVERAGE PERCENT TIME SPENT BY MEMBERS PERFORMING.....			
		PERCENT OF MEMBERS PERFORMING.....			
D-TSK		DUTY/TASK TITLE			
F		PERFORMING SUBSISTENCE INSPECTIONS		93.18 32.39 30.18 30.18	
G		PERFORMING ANIMAL MEDICAL CARE		76.14 23.45 17.85 48.03	
H		DIRECTING AND IMPLEMENTING		88.07 18.77 16.53 64.56	
I		INSPECTING COLD AND DRY FOOD STORAGE IN WAREHOUSE		84.66 11.77 9.97 74.52	
J		INSPECTING FCCD SERVICE FACILITIES		77.84 11.25 8.76 83.28	
K		PERFORMING BASE VETERINARY ANIMAL SERVICES AND ZOONOSIS		72.16 9.67 6.98 90.26	
L		CONTROL			
A		ORGANIZING AND PLANNING		63.64 4.30 2.74 93.00	
B		EVALUATING		51.14 4.45 2.28 95.28	
C		TRAINING		55.68 4.08 2.27 97.55	
D		SUPPORTING SENTRY DOG PROGRAM		37.50 5.02 1.88 99.43	
E		SUPPORTING ANIMAL RESEARCH PROGRAM		4.55 11.77 0.54 99.97	

Table 3. Job Type Description by Tasks—Food and Sanitation Inspector

TASK JOB DESCRIPTION, CASES= 227, TASKS= 236, CUTTS= 11, MTS= 20 KPATH ORDER FROM: 213 TO 232 OR TUP STAGE= 10 TIME PERFECTLY DESCRIBED ON, CUTTS= 77, 35, TSKS= 56.78		CUMULATIVE SUM OF AVERAGE PERCENT TIME SPENT BY ALL MEMBERS..... AVERAGE PERCENT TIME SPENT BY ALL MEMBERS..... AVERAGE PERCENT TIME SPENT BY MEMBERS PERFORMING..... PERCENT OF MEMBERS PERFORMING.....	
E-TSK	DUITY/TASK TITLE		
E 21	INSPECT PERISHABLE FOODS FOR CONTRACT COMPLIANCE	90.00	4.10 3.69 3.69
E 22	INSPECT PREPACKAGED FROZEN FOODS	100.00	3.32 3.32 7.02
G 3	INSPECT ARRANGEMENTS OF DAMAGE AND FOOD ITEMS	100.00	3.31 3.31 10.33
E 14	INSPECT EGGS AND EGG PRODUCTS	100.00	3.02 3.02 13.35
G 5	INSPECT STOCK ROTATION CONTROL METHOD	100.00	2.93 2.93 16.27
G 2	INSPECT AND DOCUMENT PROBLEMS HANDLING OF STORAGE ITEMS	95.00	3.08 2.92 19.19
E 24	INSPECT SANITARY CONDITIONS OF CONTAINERS AND VEHICLES USED FOR SHIPMENT	90.00	3.16 2.84 22.04
B 3	COMPILE STATISTICAL DATA FOR RECORDS AND REPORTS	65.00	4.32 2.81 24.84
G 9	PERFORM ORGANOLEPTIC EXAMINATIONS	100.00	2.68 2.68 27.52
E 33	REPORT RECOMMENDED REJECTIONS OF SUBSISTENCE ITEMS TO CONTRACTING OFFICER AND TO COMMISSARY OFFICER	95.00	2.80 2.66 30.18
E 13	INSPECT DAILY PRODUCTS FOR QUALITY AND CONTRACT COMPLIANCE	75.00	3.45 2.59 32.77
G 4	INSPECT MAINTENANCE OF TEMPERATURE AND HUMIDITY LEVELS IN STORAGE AREAS	95.00	2.72 2.59 35.36
E 18	INSPECT MISCELLANEOUS PRODUCTS SUCH AS FATS, OILS, MARGARINE, AND CEREAL	85.00	2.91 2.47 37.83
E 9	GRADE EGGS TO DETERMINE CONTRACT COMPLIANCE OF EGGS AND EGG PRODUCTS	80.00	3.07 2.46 40.29
G 6	INSPECT STORAGE AREAS FOR INSECT AND INSECT CONTROL	95.00	2.58 2.45 42.74
G 9	RECOMMEND IMMEDIATE USE OR OTHER DISPOSITION OF DETERIORATE ITEMS	90.00	2.63 2.37 45.11
F 19	INSPECT NONPERISHABLE SUBSISTENCE ITEMS FOR CONTRACT REQUIREMENTS	70.00	3.10 2.17 47.28
G 1	DETERMINE EXPECTED SHELF LIFE, CONDITION OF GOODS, AND ADEQUACY OF SUPPLY FOR EMERGENCIES	65.00	2.93 1.91 49.18
B 24	MAINTAIN FILES OF RECORDS, FORMS, CORRESPONDENCE, AND REPORTS	50.00	3.61 2.80 50.99
E 11	GRADE PERISHABLE FOODS FOR CONTRACT COMPLIANCE	50.00	3.56 1.78 52.77
E 6	COLLECT LABORATORY SAMPLES OF SUBSISTENCE ITEMS	80.00	2.20 1.76 54.53
F 5	CONDUCT SANITARY INSPECTIONS OF BASE FACILITIES	65.00	2.53 1.64 56.17
C 7	INSPECT STORAGE OF EMERGENCY SURVIVAL AND IN-FLIGHT RATIONS	70.00	2.26 1.58 57.75
E 31	PREPARE LABORATORY SAMPLES FOR SHIPMENT	70.00	2.10 1.47 59.22
E 15	INSPECT EMERGENCY AND SURVIVAL RATIONS	65.00	2.16 1.41 60.63
E 20	INSPECT PACKING METHODS AND PACKAGING	60.00	2.32 1.39 62.02
E 29	MAINTAIN LIST OF FEDERAL AND MILITARY SPECIFICATIONS	60.00	2.32 1.39 63.42
E 16	INSPECT INFLIGHT MEALS	65.00	2.11 1.37 64.79
E 23	INSPECT PROCEDURES FOR LOADING AND TRANSPORTING SUBSISTENCE ITEMS	40.00	3.20 1.28 66.07
E 28	MAINTAIN LISTS OF APPROVED SOURCES FROM OTHER GOVERNMENTAL AGENCIES	65.00	1.91 1.24 67.31

Table 4. Job Type Description by Duties - Food and Sanitation Inspector

DUTY/TASK	CUMULATIVE SUM OF AVERAGE PERCENT TIME SPENT BY ALL MEMBERS.....			
	AVERAGE PERCENT TIME SPENT BY ALL MEMBERS.....	AVERAGE PERCENT TIME SPENT BY MEMBERS PERFORMING.....	AVERAGE PERCENT TIME SPENT BY MEMBERS PERFORMING.....	PERCENT OF MEMBERS PERFORMING.....
E PERFORMING SUBSISTENCE INSPECTIONS	100.00	45.35	45.35	45.35
G INSPECTING COLD AND DRY FOOD STORAGE IN WAREHOUSE	100.00	22.74	22.74	68.09
B DIRECTING AND IMPLEMENTING	85.00	13.99	11.89	79.98
F INSPECTING FOOD SERVICE FACILITIES	85.00	12.82	10.89	90.87
H PERFORMING ANIMAL MEDICAL CARE	30.00	13.72	4.12	94.99
O TRAINING	50.00	3.66	1.83	96.82
I PERFORMING BASE VETERINARY ANIMAL SERVICES AND ZOONOSIS	30.00	4.71	1.41	98.23
1 CONTROL				
A ORGANIZING AND PLANNING	45.00	2.23	1.00	99.24
C EVALUATING	30.00	2.33	0.70	99.93
J SUPPORTING SENTRY DOC PROGRAM	5.00	0.88	0.04	99.98

Table 5. Description of Individual Members of Food and Sanitation Inspector Job Type

OVERLAP										OVERLAP									
STD					DEV					STD					DEV				
1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
211	022	0023	A	3	90850	90850	47	014	017	608	031	038			1	2	2	2	2
217	0193	K	3	90850	90850	36	073	010	010	034	036				1	2	2	2	2
223	0024	A	3	90850	90850	54	014	009	008	027	029				2	2	2	2	2
216	0101	K	4	90850	90850	29	011	020	020	024	027				1	2	2	2	1
229	0205	S	2	90850	90850	42	049	011	011	051	051				1	2	2	2	1
218	0243	J	3	90850	90850	82	015	020	015	023	028				2	2	2	2	2
214	0320	D	4	90850	90850	28	038	002	002	053	053				2	2	2	2	2
215	0312	C	4	90850	90850	37	040	035	040	048	048				1	2	2	2	2
228	0172	D	6	190870	90850	55	021	021	021	040	040				1	2	2	2	1
226	0226	H	3	90850	90850	62	011	001	001	168	168				1	2	2	2	1
221	0102	K	4	90850	90850	57	020	020	020	020	027				1	2	2	2	1
219	C174	C	3	90850	90850	38	059	013	013	060	060				1	2	2	2	1
224	0104	K	4	90850	90850	31	012	007	007	000	020				2	2	2	2	2
225	0291	L	4	90850	90850	40	076	066	066	114	120				1	2	2	2	2
220	0117	L	3	90850	90850	29	053	059	059	026	030				2	2	2	2	2
227	0235	F	5	90870	90850	27	062	066	066	027	027				1	2	2	2	1
230	0255	C	2	61870	90870	24	026	026	026	136	142				1	2	2	2	1
231	0253	C	3	90850	90850	36	016	014	014	030	033				2	2	2	2	2

Table 6. Percentage of Members Performing Each Task—
Veterinary Groups with Increasing Amounts of Active Federal Military Service

TASK	1-12 MONTHS	13-24 MONTHS	25-48 MONTHS	49-96 MONTHS	97-144 MONTHS	145-192 MONTHS	193-240 MONTHS	241 OR MORE MONTHS
A 1	0.	2.222	2.857	11.765	18.333	25.926	43.590	44-444
A 2	0.	2.222	2.857	27.451	46.667	66.667	92.308	94-444
A 3	0.	6.667	10.000	29.412	45.000	59.259	84.615	77-778
A 4	0.	4.444	1.429	17.647	36.667	37.037	61.538	72.222
A 5	0.	11.111	8.571	31.373	45.000	62.963	84.615	83-333
A 6	0.	2.222	1.429	17.647	38.333	48.148	61.538	56.667
A 7	0.	2.222	1.429	13.725	28.333	44.444	71.795	83-333
A 8	0.	24.444	34.286	50.980	66.667	74.074	92.308	94-444
A 9	0.	26.667	27.143	64.706	71.667	66.667	89.744	88-889
A 10	0.	17.778	7.143	23.529	43.333	55.556	66.667	88-889
A 11	0.	2.222	1.429	17.647	38.333	44.444	74.359	88-889
A 12	0.	4.444	0.	7.843	25.000	29.630	51.282	66.667
A 13	0.	2.222	7.143	7.843	31.667	29.630	48.718	55-556
A 14	0.	2.222	0.	7.843	13.333	44.444	41.026	50.000
A 15	0.	4.444	7.143	37.255	51.667	55.556	92.308	83-333
A 16	0.	0.	4.286	13.725	30.000	40.741	53.846	77.778
A 17	0.	11.111	14.286	41.176	46.667	48.148	69.231	72.222
A 18	0.	0.	1.429	3.922	18.333	37.037	56.410	61-111
A 19	0.	2.222	2.857	9.804	38.333	48.148	84.615	83-333
H 1	0.	2.222	0.	5.882	8.333	11.111	12.821	44-444
B 2	8.333	17.778	30.000	35.294	55.000	70.370	74.074	77.778
B 3	0.	44.444	55.714	64.706	75.000	88.889	92.308	83-333
B 4	8.333	28.889	25.714	43.137	55.000	62.963	64.103	72-222
B 5	0.	4.444	11.429	25.490	36.333	25.926	46.154	38-889
B 6	0.	6.667	5.714	25.490	33.333	40.741	51.282	61-111
B 7	0.	0.	1.429	5.882	10.000	18.519	23.077	44-444
R 8	0.	0.	1.429	7.843	13.333	3.704	15.385	11-111
B 9	0.	15.556	28.571	37.255	35.000	44.444	53.846	55-556
B 10	0.	6.667	4.286	19.608	18.333	22.222	43.590	83-333
B 11	0.	2.222	1.429	23.529	41.667	62.963	89.744	94-444
H 12	0.	2.222	1.429	21.569	33.333	51.052	76.923	77.778
B 13	0.	4.444	5.714	37.255	50.000	66.667	92.308	94-444
B 14	0.	0.	1.429	19.608	45.000	48.148	76.923	83-333
S 15	0.	8.889	8.571	23.529	41.667	59.259	87.179	83-333
H 16	0.	0.	2.857	15.686	33.333	48.148	66.667	66-667
B 17	0.	0.	1.429	5.882	25.000	18.519	28.205	44-444
B 18	0.	6.667	15.714	45.098	53.333	66.667	89.744	94-444
H 19	8.333	0.	7.143	17.647	40.000	51.852	66.667	72.222
B 20	0.	0.	0.	7.843	15.000	25.926	38.462	50.000
R 21	0.	6.667	4.286	17.647	26.667	33.333	58.974	72-222
H 22	25.000	40.000	42.857	54.902	51.667	59.259	69.231	77.778
H 23	16.667	48.889	57.143	70.588	66.667	55.556	69.231	55-556
B 24	8.333	42.222	57.143	76.471	68.333	62.963	79.487	72.222
B 25	0.	2.222	1.429	5.882	15.000	22.222	30.769	44-444
B 26	0.	2.222	15.714	11.765	26.667	33.333	35.897	50.000
B 27	8.333	48.889	40.000	72.549	83.333	96.296	89.744	83-333
B 28	8.333	46.667	50.000	52.941	60.000	77.778	74.359	77.778
B 29	0.	20.000	18.571	29.412	43.333	51.852	58.974	61-111

Table 7. Average Percentage of Time Spent on Each Task—
Veterinary Groups with Increasing Amounts of Active Federal Military Service

TASK	1-12 MONTHS	13-24 MONTHS	25-48 MONTHS	49-96 MONTHS	97-144 MONTHS	145-192 MONTHS	193-240 MONTHS	241 OR MORE MONTHS
A 1	0.011	0.011	0.011	0.011	0.071	0.070	0.102	0.200
A 2	0.035	0.061	0.296	0.490	0.633	0.891	0.889	0.176
A 3	0.054	0.104	0.320	0.348	0.550	0.596	0.493	
A 4	0.053	0.011	0.203	0.272	0.348	0.407	0.437	
A 5	0.005	0.106	0.327	0.408	0.649	0.728	0.782	
A 6	0.005	0.005	0.130	0.309	0.491	0.436	0.355	
A 7	0.030	0.009	0.075	0.303	0.405	0.451	0.797	
A 8	0.333	0.487	0.530	0.726	0.872	0.828	0.886	
A 9	0.008	0.371	0.847	0.905	0.801	1.027	0.849	
A 10	0.310	0.351	0.217	0.497	0.523	0.439	0.632	
A 11	0.008	0.026	0.137	0.378	0.420	0.557	0.693	
A 12	0.035	0.119	0.132	0.328	0.326	0.372	0.378	
A 13	0.030	0.013	0.070	0.259	0.201	0.286	0.340	
A 14	0.030	0.026	0.131	0.106	0.293	0.349	0.395	
A 15	0.067	0.109	0.445	0.594	0.560	0.996	0.896	
A 16	0.020	0.126	0.220	0.220	0.277	0.396	0.546	
A 17	0.164	0.199	0.573	0.543	0.454	0.512	0.531	
A 18	0.008	0.026	0.036	0.133	0.313	0.387	0.382	
A 19	0.030	0.026	0.109	0.359	0.373	0.634	0.586	
B 1	0.024	0.059	0.059	0.080	0.066	0.092	0.240	
B 2	0.132	0.276	0.345	0.316	0.513	0.788	0.573	0.651
B 3	0.008	0.296	0.691	1.217	1.438	1.733	1.011	3.138
B 4	0.464	0.384	0.564	0.724	0.956	0.493	0.650	
B 5	0.008	0.042	0.092	0.211	0.277	0.163	0.210	0.193
B 6	0.008	0.061	0.059	0.186	0.243	0.302	0.309	0.472
B 7	0.008	0.015	0.025	0.049	0.086	0.129	0.223	
B 8	0.008	0.004	0.114	0.107	0.018	0.115	0.075	
B 9	0.008	0.278	0.277	0.322	0.217	0.354	0.448	
B 10	0.034	0.034	0.146	0.146	0.221	0.229	0.221	0.163
B 11	0.038	0.013	0.311	0.384	0.656	0.856	1.004	
B 12	0.030	0.008	0.197	0.286	0.412	0.631	0.578	
B 13	0.063	0.058	0.496	0.625	0.724	1.037	1.077	
B 14	0.020	0.010	0.212	0.385	0.484	0.656	0.588	
B 15	0.158	0.078	0.253	0.410	0.573	0.761	0.604	
B 16	0.008	0.019	0.164	0.283	0.336	0.544	0.544	
B 17	0.008	0.011	0.086	0.229	0.159	0.274	0.321	
B 18	0.104	0.272	0.344	0.849	0.938	1.102	1.201	
B 19	0.008	0.072	0.161	0.463	0.626	0.580	0.587	
B 20	0.008	0.051	0.179	0.254	0.307	0.404	0.438	
B 21	0.154	0.094	0.238	0.304	0.329	0.557	0.659	
B 22	0.856	0.651	0.753	0.722	0.685	0.807	1.069	
B 23	0.500	1.056	1.145	1.050	0.871	0.584	0.536	0.372
B 24	0.493	1.056	1.627	1.255	1.359	0.939	0.744	0.638
B 25	0.020	0.017	0.236	0.268	0.188	0.340	0.340	
B 26	0.077	0.390	0.157	0.276	0.340	0.288	0.359	
B 27	0.022	0.053	0.761	1.213	1.636	1.133	1.016	
B 28	0.221	1.191	1.216	0.937	0.986	1.095	0.672	2.235
B 29	0.430	0.390	0.296	0.556	0.713	0.481	0.391	
A 29	0.008	0.264	0.072	0.161	0.179	0.254	0.307	

Table 8. Group Similarities in Terms of Overlap of Average Percentage of Time Spent on Tasks

SPC001	SPC002	SPC003	SPC004	SPC005	SPC006	SPC007	SPC008	SPC009	SPC010	SPC011	SPC012
100.000	32.917	72.544	47.476	24.682	36.693	77.612	83.049	75.186	68.847	58.694	49.134
SPC001	SPC002	SPC003	SPC004	SPC005	SPC006	SPC007	SPC008	SPC009	SPC010	SPC011	SPC012
32.917	100.000	18.962	9.832	26.576	12.956	36.036	34.164	27.572	23.465	16.066	9.857
SPC001	SPC002	SPC003	SPC004	SPC005	SPC006	SPC007	SPC008	SPC009	SPC010	SPC011	SPC012
72.544	18.962	100.000	63.499	29.802	48.393	59.290	77.069	86.951	85.110	76.767	66.885
SPC001	SPC002	SPC003	SPC004	SPC005	SPC006	SPC007	SPC008	SPC009	SPC010	SPC011	SPC012
47.476	9.832	63.499	100.000	47.825	77.734	34.397	49.676	56.330	76.147	82.368	86.747
SPC001	SPC002	SPC003	SPC004	SPC005	SPC006	SPC007	SPC008	SPC009	SPC010	SPC011	SPC012
24.682	26.576	29.402	47.423	100.000	60.333	20.873	31.368	32.456	38.524	44.746	44.665
SPC001	SPC002	SPC003	SPC004	SPC005	SPC006	SPC007	SPC008	SPC009	SPC010	SPC011	SPC012
36.693	77.612	83.049	75.186	68.847	58.694	49.042	45.220	55.850	67.263	70.370	49.134
SPC001	SPC002	SPC003	SPC004	SPC005	SPC006	SPC007	SPC008	SPC009	SPC010	SPC011	SPC012
77.612	83.049	75.186	68.847	58.694	49.042	45.220	55.850	67.263	70.370	49.134	36.786
SPC001	SPC002	SPC003	SPC004	SPC005	SPC006	SPC007	SPC008	SPC009	SPC010	SPC011	SPC012
83.049	34.164	20.873	100.000	28.004	69.678	100.000	80.538	100.000	72.017	61.808	51.005
SPC001	SPC002	SPC003	SPC004	SPC005	SPC006	SPC007	SPC008	SPC009	SPC010	SPC011	SPC012
75.186	27.572	86.951	70.370	40.962	63.168	63.168	79.769	79.769	69.489	59.207	59.207
SPC001	SPC002	SPC003	SPC004	SPC005	SPC006	SPC007	SPC008	SPC009	SPC010	SPC011	SPC012
68.847	23.465	85.110	70.370	43.820	63.949	54.949	72.017	79.769	100.000	82.421	71.15
SPC001	SPC002	SPC003	SPC004	SPC005	SPC006	SPC007	SPC008	SPC009	SPC010	SPC011	SPC012
58.694	12.956	48.393	77.734	60.333	100.000	28.004	40.962	43.20	55.850	67.263	49.134
SPC001	SPC002	SPC003	SPC004	SPC005	SPC006	SPC007	SPC008	SPC009	SPC010	SPC011	SPC012
49.134	9.832	59.290	34.164	20.873	100.000	100.000	69.678	63.168	54.949	45.220	36.786
SPC001	SPC002	SPC003	SPC004	SPC005	SPC006	SPC007	SPC008	SPC009	SPC010	SPC011	SPC012
47.521	10.643	61.452	91.647	50.859	80.581	33.970	49.165	54.429	67.801	78.742	82.467
SPC001	SPC002	SPC003	SPC004	SPC005	SPC006	SPC007	SPC008	SPC009	SPC010	SPC011	SPC012
41.941	8.999	77.669	44.677	31.368	40.962	69.678	100.000	80.538	72.017	61.808	51.005
SPC001	SPC002	SPC003	SPC004	SPC005	SPC006	SPC007	SPC008	SPC009	SPC010	SPC011	SPC012
82.001	31.262	83.955	56.640	48.541	79.155	79.155	31.456	43.820	63.168	60.333	59.207
SPC001	SPC002	SPC003	SPC004	SPC005	SPC006	SPC007	SPC008	SPC009	SPC010	SPC011	SPC012
52.900	12.772	69.821	91.670	47.595	74.618	39.452	54.949	72.017	79.769	100.000	82.354
SPC001	SPC002	SPC003	SPC004	SPC005	SPC006	SPC007	SPC008	SPC009	SPC010	SPC011	SPC012
79.708	28.337	99.827	56.465	33.284	47.005	65.067	84.656	90.683	93.816	73.086	61.743
SPC001	SPC002	SPC003	SPC004	SPC005	SPC006	SPC007	SPC008	SPC009	SPC010	SPC011	SPC012
71.300	19.463	87.482	63.811	31.017	49.106	58.122	74.024	79.07	82.422	75.873	69.548
SPC001	SPC002	SPC003	SPC004	SPC005	SPC006	SPC007	SPC008	SPC009	SPC010	SPC011	SPC012
45.450	15.659	60.280	94.191	52.923	91.166	32.910	48.042	54.44	67.341	80.305	85.133
SPC001	SPC002	SPC003	SPC004	SPC005	SPC006	SPC007	SPC008	SPC009	SPC010	SPC011	SPC012
71.027	18.230	90.557	63.075	28.703	47.293	57.970	74.201	83.882	81.598	75.349	64.808
SPC001	SPC002	SPC003	SPC004	SPC005	SPC006	SPC007	SPC008	SPC009	SPC010	SPC011	SPC012
71.027	18.230	90.557	63.075	28.703	47.293	57.970	74.201	83.882	81.598	75.349	64.808
GRP054	GRP055	GRP056	GRP057	GRP058	GRP059	GRP060	GRP061	GRP062	GRP063	GRP064	GRP065
12.134	5.823	23.705	31.173	68.460	63.151	7.727	17.748	19.547	29.680	41.014	47.334
GRP036	GRP042	GRP043	GRP044	GRP045	GRP046	GRP047	GRP048	GRP049	GRP050	GRP051	GRP052
52.160	16.932	1.783	45.921	38.574	18.386	28.838	29.272	37.112	43.423	47.359	43.597
GRP042	GRP043	GRP044	GRP045	GRP046	GRP047	GRP048	GRP049	GRP050	GRP051	GRP052	GRP053
76.978	20.066	89.622	50.494	45.681	62.202	78.657	83.896	81.594	73.056	62.846	62.846
GRP022	GRP023	GRP024	GRP025	GRP026	GRP027	GRP028	GRP029	GRP030	GRP031	GRP032	GRP033
45.399	1.234	49.413	26.732	16.939	40.252	54.264	49.677	40.932	40.932	34.994	31.931
GRP029	GRP030	GRP031	GRP032	GRP033	GRP034	GRP035	GRP036	GRP037	GRP038	GRP039	GRP040
35.732	1.072	42.817	26.296	5.110	15.322	32.889	36.991	41.509	34.516	31.915	30.174
GRP030	GRP031	GRP032	GRP033	GRP034	GRP035	GRP036	GRP037	GRP038	GRP039	GRP040	GRP041
52.181	5.437	45.880	13.522	10.998	45.278	51.955	57.718	52.809	48.256	52.809	48.256
GRP031	GRP032	GRP033	GRP034	GRP035	GRP036	GRP037	GRP038	GRP039	GRP040	GRP041	GRP042
29.266	1.762	45.491	39.337	18.765	28.792	26.120	33.370	42.663	42.414	42.281	41.098
GRP032	GRP033	GRP034	GRP035	GRP036	GRP037	GRP038	GRP039	GRP040	GRP041	GRP042	GRP043
52.160	16.932	1.783	45.927	44.581	20.409	32.880	45.662	52.621	58.270	59.161	53.023
GRP033	GRP034	GRP035	GRP036	GRP037	GRP038	GRP039	GRP040	GRP041	GRP042	GRP043	GRP044
46.713	45.376	27.986	16.057	19.685	16.990	45.524	40.568	28.903	29.319	22.869	15.215
GRP046	GRP047	GRP048	GRP049	GRP050	GRP051	GRP052	GRP053	GRP054	GRP055	GRP056	GRP057
32.509	42.373	30.616	42.445	74.344	51.233	35.333	40.804	41.867	39.737	41.867	39.737
36.103	78.774	17.341	7.261	23.436	10.554	41.422	35.132	26.813	21.797	14.041	7.254
GRP047	GRP048	GRP049	GRP050	GRP051	GRP052	GRP053	GRP054	GRP055	GRP056	GRP057	GRP058
22.948	59.712	13.012	7.509	21.104	9.817	25.259	24.944	21.005	16.201	11.511	7.697
GRP048	GRP049	GRP050	GRP051	GRP052	GRP053	GRP054	GRP055	GRP056	GRP057	GRP058	GRP059
69.744	22.453	85.076	74.076	41.979	40.453	55.569	73.613	80.838	89.192	86.287	75.402

Table 9. Group Differences in Terms of Percentage of Members Performing Each Task

SPC004 VET TECHNICIAN 9C870 (N=90) VS SPC003 VET SPECIALIST 90850 (N=176)	
VETERINARY CAREER LADDER INVENTORY - AFSCS 908X0/908X1	
SPC004 MEMBERS = 9C CAFSC 90870	VETERINARY TECHNICIAN
SPC003 MEMBERS = 176 CAFSC 90850	VETERINARY SPECIALIST
AVERAGE PERCENT TIME BY ALL GROUP MEMBERS - DIFFERENCE, SPC004 MINUS SPC003.	
PERCENT MEMBERS PERFORMING - DIFFERENCE, SPC004 MINUS SPC003.	
SPC004 AVERAGE PERCENT TIME BY ALL GROUP MEMBERS.	
SPC004 PERCENT MEMBERS PERFORMING.	
SPC003 AVERAGE PERCENT TIME BY ALL GROUP MEMBERS.	
SPC003 PERCENT MEMBERS PERFORMING.	
U-TSK	
EE 6	COLLECT LABORATORY SAMPLES OF SUBSTINENCE ITEMS
EE 21	INSPECT PERISHABLE FOODS FOR CONTRACT COMPLIANCE
EE 14	INSPECT EGGS AND EGG PRODUCTS
FF 24	INSPECT SANITARY CONDITIONS OF COTTA-DEKS AND VEHICLES USED FOR SHIPMENT
EE 31	PREPARE LABORATORY SAMPLES FOR SHIPMENT
EE 22	INSPECT PREPACKAGED FROZEN FOODS
EE 13	INSPECT DAIRY PRODUCTS FOR QUALITY AND CONTRACT COMPLIANCE
II 8	MAINTAIN ORDER AND CLEANLINESS OF BASE VETERINARY CLINIC
EE 18	INSPECT MISCELLANEOUS PRODUCTS SUCH AS FATS, OILS, MARGARINE, AND CEREAL
CC 9	EVALUATE THE WORK OF VETERINARY SPECIALISTS 90850
HH 13	DIRECT PERSONNEL IN MAINTAINING WORK PERFORMANCE
HH 22	MAINTAIN HEALTH AND TREATMENT RECORDS OF ANIMALS
BB 18	ELIT AND REVIEW CORRESPONDENCE
EE 9	GRADE EGGS TO DETERMINE CONTRACT COMPLIANCE OF EGGS AND EGG PRODUCTS
HH 19	EXAMINE FECAL SPECIMENS
DD 19	EXPLAIN POLICIES AND DIRECTIVES TO SUBORDINATES
HH 23	PCST DATA IN ANIMAL RECORDS
AA 15	PLAN AND SCHEDULE WORK ASSIGNMENTS
HH 21	MAINTAIN ASEPTIC CONDITIONS IN TREATMENT AND SURGERY ROOMS
CC 8	PERFORM ORGANOPHTHIC EXAMINATIONS
EE 20	INSPECT PACKING METHODS AND PACKAGING
CC 2	EVALUATE ACHIEVEMENT TO WORK STANDARDS
BB 11	CCNSUL SUBORDINATES ON CAREER DEVELOPMENT
DD 12	MAINTAIN AND REVIEW TRAINING RECORDS
CC 15	REVIEW TRAINING PROGRESS OF INDIVIDUALS
RR 3	COMPILE STATISTICAL DATA FOR RECORDS AND REPORTS
HH 9	ASSIST IN PHYSICAL EXAMINATION OF ANIMALS
AA 2	ASSIGN PERSONNEL TO DUTY POSITIONS
EE 19	INSPECT INOPERTHISHABLE SUBSTINENCE ITEMS FOR CONTRACT REQUIREMENTS
BB 30	PREPARE WORK SCHEDULES
CC 15	PREPARE AIRMAN PERFORMANCE REPORTS IAF FORMS 911,916, 9091
BB 32	RESOLVE TECHNICAL PROBLEMS OF SUBORDINATES
CC 1	ASSIST IN REVIEWING AND EVALUATING UNIT OPERATIONS FOR EFFICIENCY, ECONOMY AND EFFECTIVENESS
BB 40	SUPERVISE INSPECTIONS OF FOOD SERVICE AND STORAGE FACILITIES
CC 1	ADMINISTER WRITTEN, ORAL, AND PERFORMANCE TESTS

Table 10. Analysis of Task Rating Factor by Groups - Time on Job Before Performing Task

NUMBER OF GROUP MEMBERS RESPONDING TO EACH TASK, AND MEAN AND STANDARD DEVIATION OF TASK RATINGS. A RATING OF 1 INDICATES TASK WAS PERFORMED DURING FIRST MONTH ON JOB. RATING 2 INDICATES TASK WAS FIRST PERFORMED AFTER THE 1ST MONTH BUT WITHIN 3 MOS. RATING 3 = 3 TO 6 MOS. RATING 4 = 6 TO 12 MOS. RATING 5 = 12 TO 18 MOS. RATING 6 = 18 TO 24 MOS. RATING 7 INDICATES TASK WAS FIRST PERFORMED AFTER 24 MONTHS ON THE JOB.

GROUP-ID*	GROUP MEMBERS	SPC001	SPC002	SPC003	SPC004	SPC005	SPC006	SPC010	SPC015	SPC016	GRP001
GROUP MEMBERS	FACTOR SUBGRP	25	17	176	90	9	10	51	127	144	327
		25	17	172	88	9	10	51	126	139	321
VARIABLE D-TSK INFO											
A 1 N	1	0	0	12	34	0	5	6	3	42	52
MEAN	6.000	0.	5.333	4.294	0.	2.200	5.500	4.000	4.310	4.365	
SD	-0.	0.	1.972	2.333	0.	2.400	1.803	1.633	2.445	2.394	
A 2 N	1	2	23	72	6	10	14	3	96	114	
MEAN	3.000	1.000	3.783	2.625	1.000	1.800	4.500	1.333	2.469	2.675	
SD	-0.	-0.	2.302	2.251	-0.	1.778	2.291	0.471	2.150	2.250	
A 3 N	1	2	30	67	6	9	15	10	89	115	
MEAN	5.000	1.000	2.967	2.567	1.000	1.778	3.000	2.800	2.427	2.522	
SD	-0.	-0.	1.906	2.180	-0.	1.872	2.000	1.600	2.125	2.074	
A 4 N	0	0	16	52	3	9	9	2	68	80	
MEAN	0.	0.	3.187	3.673	1.000	2.333	3.556	2.000	3.368	3.325	
SD	0.	0.	1.878	2.276	-0.	1.826	2.166	1.000	2.216	2.201	
A 5 N	2	0	34	67	5	10	16	11	90	116	
MEAN	4.500	0.	3.265	2.851	1.000	2.000	4.062	2.909	2.664	2.847	
SD	0.500	0.	2.146	2.208	-0.	1.483	2.436	1.621	2.073	2.142	
A 6 N	0	0	18	50	6	9	9	2	71	83	
MEAN	0.	0.	4.444	2.900	1.000	1.899	5.121	5.000	2.676	2.988	
SD	0.	0.	2.191	2.274	-0.	0.875	2.103	1.000	2.135	2.263	
A 7 N	1	0	10	54	5	10	7	2	70	80	
MEAN	7.000	0.	3.600	3.333	1.000	2.100	4.143	2.000	3.071	3.112	
SD	-0.	0.	2.154	2.419	-0.	1.814	2.295	1.000	2.374	2.366	
A 8 N	3	2	69	77	9	10	26	34	109	170	
MEAN	4.667	1.000	2.986	2.662	1.000	1.800	3.346	2.824	2.477	2.671	
SD	0.471	-0.	1.822	2.136	-0.	1.778	2.018	1.444	2.084	1.985	
A 9 N	3	2	72	77	9	10	93	30	108	173	
MEAN	3.333	1.000	3.000	2.506	1.000	2.000	3.394	2.867	2.296	2.601	
SD	0.943	-0.	1.922	2.099	-0.	0.632	2.399	1.335	1.877	1.949	
A 10 N	1	0	31	56	6	10	12	12	79	104	
MEAN	3.000	0.	3.548	3.036	1.000	2.400	4.583	3.000	2.772	3.010	
SD	-0.	0.	2.168	1.973	-0.	1.855	2.491	1.414	1.968	2.045	
A 11 N	1	0	18	56	7	9	9	2	79	91	
MEAN	3.000	0.	3.111	3.196	1.000	2.333	4.111	1.500	2.810	2.923	
SD	-0.	0.	2.105	2.207	-0.	1.944	2.514	0.500	2.087	2.150	

Table 11. Identification of Veterinary Groups

Group No.	Group Title
SPC001	DAFSC 90830 Apprentice Veterinary Specialist
SPC002	DAFSC 90831 Laboratory Animal Specialist
SPC003	DAFSC 90850 Veterinary Specialist
SPC004	DAFSC 90870 Veterinary Technician
SPC005	DAFSC 90871 Laboratory Animal Technician
SPC006	DAFSC 90891 Veterinary Superintendent
SPC007	1 to 12 months AFMS
SPC008	13 to 24 months AFMS
SPC009	25 to 48 months AFMS
SPC010	49 to 96 months AFMS (2d Enlistment)
SPC011	97 to 144 months AFMS
SPC012	145 to 192 months AFMS
SPC013	193 to 240 months AFMS
SPC014	241 or more months AFMS
SPC015	First enlistment (-48 mos AFMS)
SPC016	Third or later enlistment (97 + mos AFMS)
SPC017	3- and 5-skill level grads basic vet course
SPC018	3- and 5-skill level nongrads basic vet course
SPC019	7-skill level grads advanced vet course
SPC020	7-skill level nongrads advanced vet course
SPC021	5-skill level airmen with directed duty assignment
SPC022	5-skill level airmen with no directed duty assignment
GRP001	Veterinary Career Ladders Total Sample
GRP022	Perishable Foods Inspector
GRP023	NCOIC Veterinary Training
GRP029	Egg Inspector
GRP030	Inspector, Food Service Facilities
GRP036	Food Inspection Supervisor
GRP042	Veterinary Specialist (J Journeyman)
GRP046	Laboratory Animal Supervisor
GRP050	Food and Sanitation Inspector
GRP053	Veterinary Specialist, Sentry Dog Support
GRP054	NCOIC Veterinary Services
GRP072	Depot and Dockside Food Inspector
GRP111	Laboratory Animal Specialist I
GRP087	Laboratory Animal Specialist II

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11. SUPPLEMENTARY NOTES	12. SPONSORING MILITARY ACTIVITY Personnel Research Laboratory Lackland AFB, Texas 78236	
13. ABSTRACT In keeping with present trends toward the automation of personnel information, the Air Force method of job analysis provides for the exploitation of advances in electronic computer technology. Computer capability is applied not only in the analysis of job inventory data but also in the construction, administration, and publication phases of the procedure. During inventory construction the computer is used to prepare alphabetic lists of tentative task statements according to pertinent key words. This grouping by topic facilitates the detection of redundancy and insures the elimination of duplicate statements. In the administration phase, the computer selects the required sample of job incumbents from current personnel rosters maintained on magnetic tape. In addition, the computer prints names and addresses on appropriate labels to attach to inventories for mailing. It is in the area of occupational data analysis, however, that the computer makes its most impressive impact. By application of a complex program consisting of over 50,000 instructions, those incumbents in a survey sample who perform essentially the same job are grouped together, and a job description composed of duties and tasks is published for each such job type identified. The computer also lists information available for each case and reports means, standard deviations, and distributions of values for specified variables. Composite job descriptions may also be obtained for any group defined in terms of job-related variables such as grade, specialty, years of experience, or specialized training. Other programs compute and generate tables showing group similarities and group differences, thus providing a condensed picture of interrelationships or revealing dissimilarities among job types or other groups. And finally, a program selects and arranges the job descriptions, tabular outputs, and explanatory text materials in any desired order and publishes the complete job analysis survey report.		

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